**Helpful Tips and Information for Completing Part 3 (Paragraphs 5 and 6) of the AP Biology Final Exam**

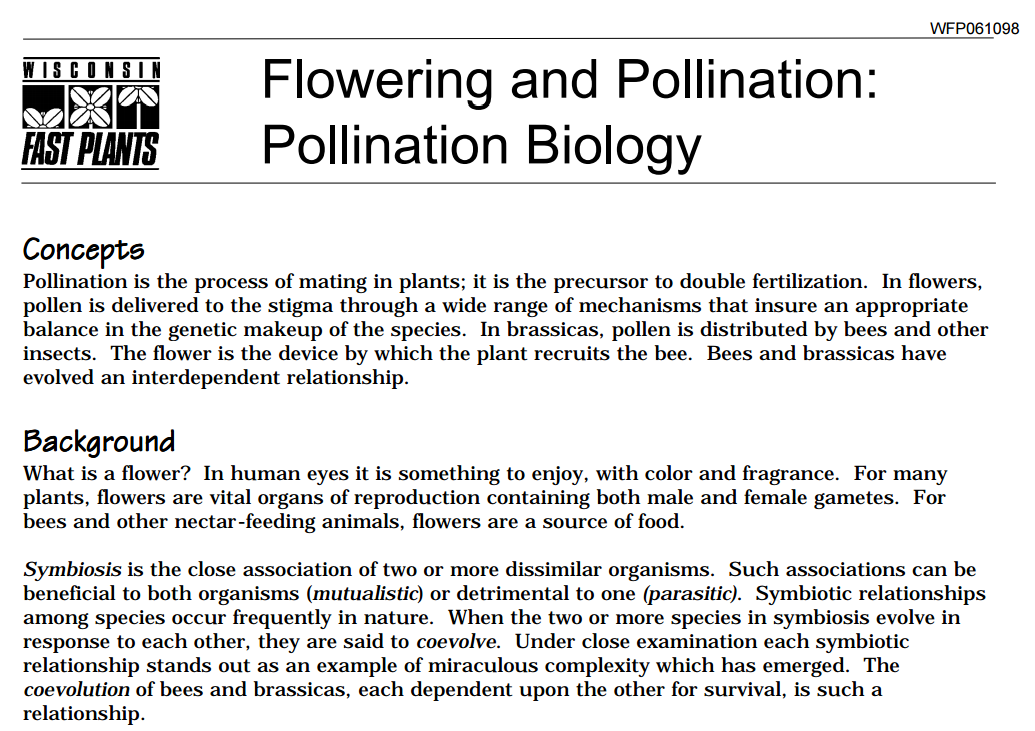
Mrs. Krouse, AP Biology

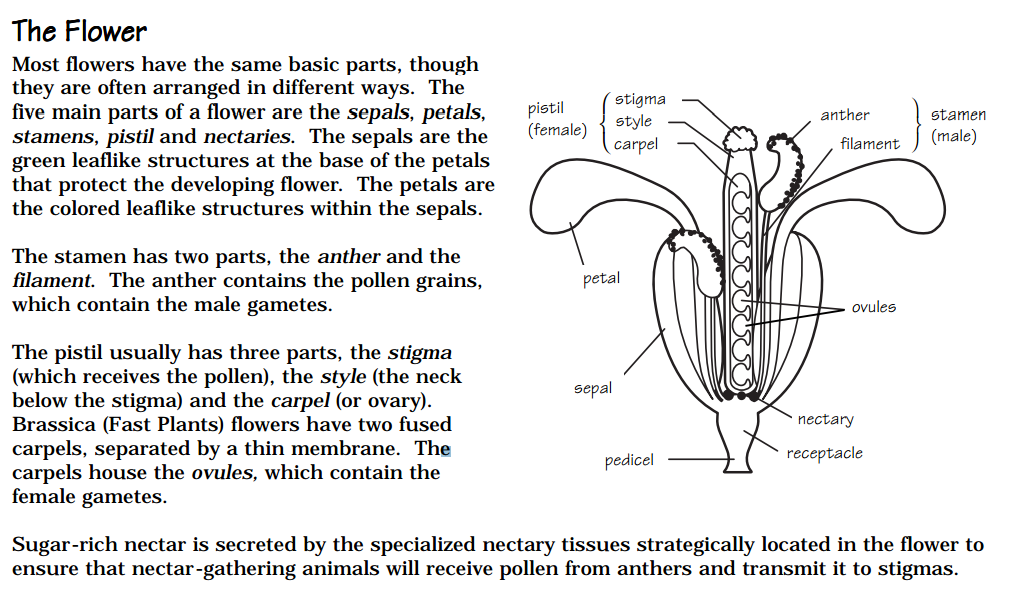
**Paragraph 5:** Life Cycle

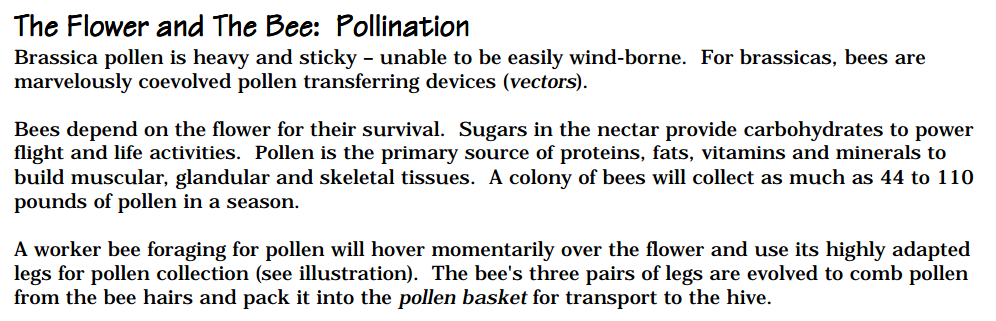
1. Identify the purpose of pollination.
2. Describe the process of pollination, and identify the plant structures involved.

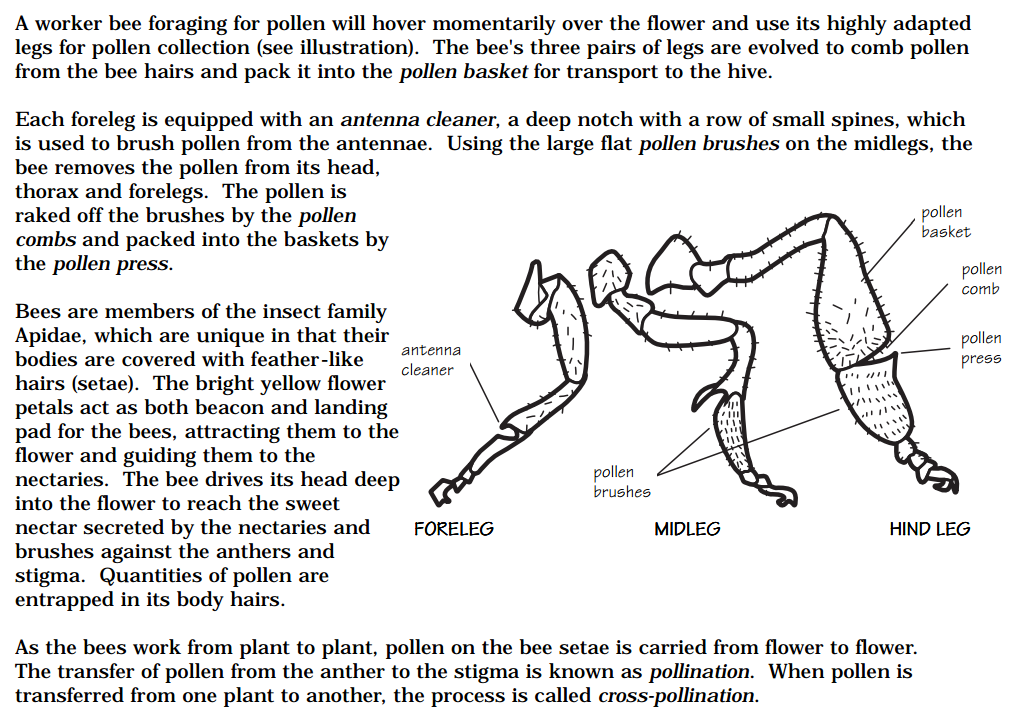
For both parts A and B, use the following information provided by the Wisconsin Fast Plants program at the University of Wisconsin Madison

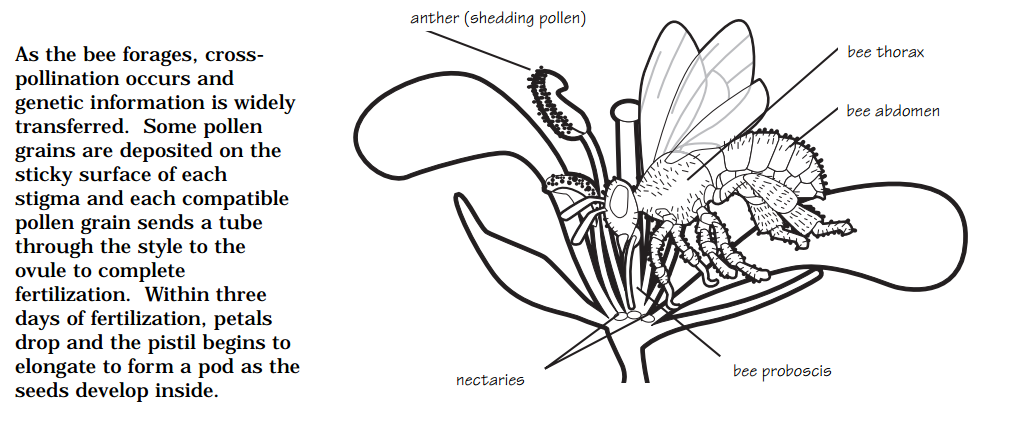
*Please remember, all of this must be IN YOUR OWN WORDS. You cannot directly copy a sentence from any outside source. This will result in you receive a zero for this paragraph in the final exam report.*







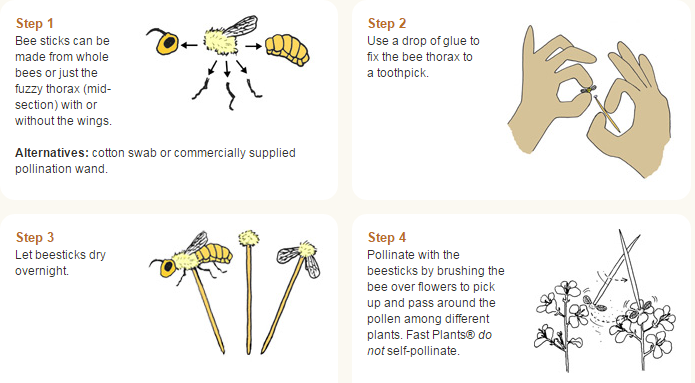




1. Explain how you pollinated your F1 plants.

For part C, use the following information provided by the Wisconsin Fast Plants program website at the University of Wisconsin Madison

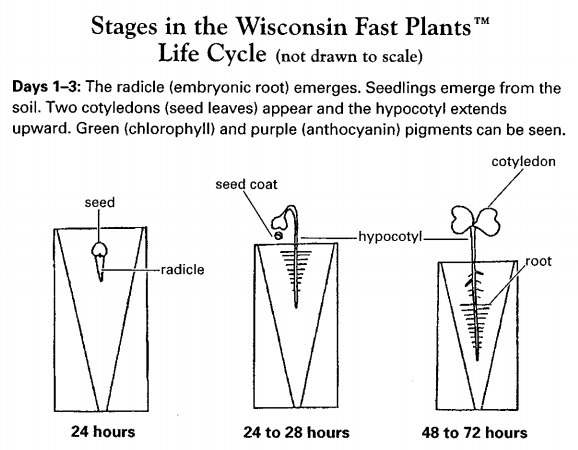
Pollination activities engage students actively in spreading pollen among plants using a ***bee stick***so that they successfully reproduce and develop seed in the next stage. (Alternatives to the bee stick, such as a cotton swab or commercially supplied pollination wand can also be used).

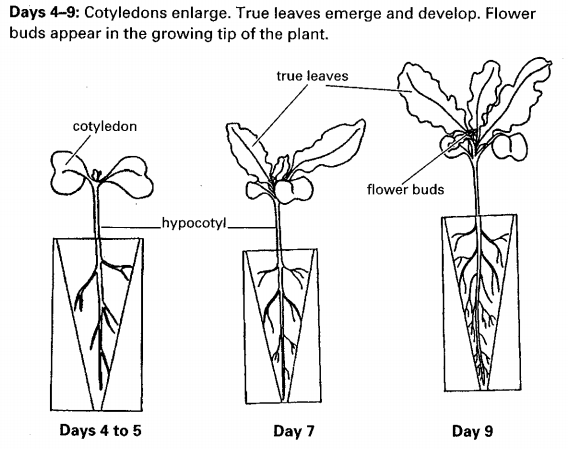


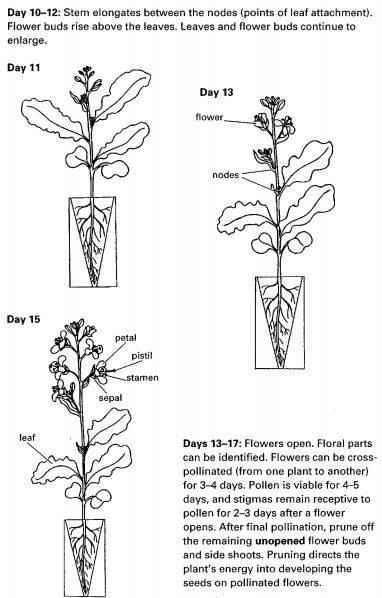
1. Describe observable changes that you saw in the plant between pollination and seed harvesting. State how long this process typically takes in Wisconsin Fast Plants.

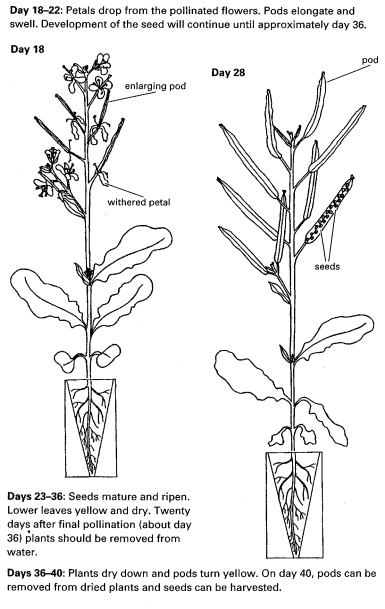
For part D, use the information below provided by the following source: <http://abacus.bates.edu/acad/depts/biobook/FastPGro.pdf>

*Note: This information was also in the Part 1 Tips document*









**Paragraph 6:** F2 Generation Plants

1. Show a Punnett square depicting a dihybrid cross between the F1 plants and state your expected F2 phenotype frequencies (as fractions and decimals rounded to the nearest thousandth).

This requirement should be pretty straight forward!

1. Provide a chart to show your observed phenotype (i.e. stem and leaf color) data for the F2 plants (as whole numbers of plants AND decimal frequencies rounded to the nearest thousandth).

We are using the following chart to collect data in class…

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Number of Plants with Each Phenotype** | | | |  |
| **Class Period** | Purple Stem / Green Leaf | Non-Purple (Green) Stem / Green Leaf | Purple Stem/Yellow-Green Leaf | Non-purple Stem (Green) /Yellow-Green Leaf | Total |
| 1st Period |  |  |  |  |  |
| 5th Period |  |  |  |  |  |
| 7th Period |  |  |  |  |  |
| Total |  |  |  |  |  |

The chart you include in your report, however, will be different. It must meet the following requirements from the rubric…

1. Your chart has been created in Excel, Word, or a similar program.
2. Your chart is well organized.
3. Your chart has a detailed and clear title.
4. Your chart has appropriate column / row labels with units (where appropriate).
5. Your chart includes whole number data and correct decimal frequencies (rounded to the nearest thousandth).
6. Describe how your observed frequencies differ from your expected frequencies.

Here, you can discuss how our observed DECIMAL frequencies (from the data we collected) differ from our expected DECIMAL frequencies (determined using the dihybrid Punnett square from part A).